

REMARKS

I. Introduction

In response to the final Office Action dated July 19, 2011, Applicants have amended independent claim 1 to further clarify the subject matter of the present disclosure. Support for the amendment to claim 1 may be found, for example, in Table 1, Examples X1 to Y2, and X7 to X18 on page 42 of the specification. Applicants have taken care to avoid the introduction of new matter.

A Request for Continued Examination (RCE) is being filed concurrently herewith.

For the reasons set forth below, Applicants respectfully submit that all pending claims are patentable over the cited prior art references.

II. The Rejection Of Claims 1-2, 8-13, 17 And 18 Under 35 U.S.C. § 103

Claims 1, 8-10, 13, 17 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Suzuki et al. (US 2002/0037450) in view of Delnick (USP No. 5,948,464), Daroux et al. (USP No. 6,562,511), and Kizu (US 2003/0165739); claim 2 as being unpatentable over Suzuki, Delnick, Daroux and Kizu as evidenced by the melting point of acrylonitrile retrieved from <http://scientificpolymer.com/catalog/description.asp?QProductCode=134> on 3/27/2010; claim 11 as being unpatentable over Suzuki in view of Delnick, Daroux and Kizu and further in view of Ota et al. (USP No. 6,365,300); and claim 12 as being unpatentable over Suzuki in view of Delnick, Daroux and Kizu and further in view of Hampden-Smith et al. (US 2002/0168570). Applicants respectfully submit that Suzuki, Delnick, Daroux, Kizu, scientificpolymer, Ota, and Hampden-Smith fail to render the pending claims obvious for at least the following reasons.

With regard to the present disclosure, amended independent claim 1 recites, in part, a lithium ion secondary battery comprising a positive electrode for absorbing and desorbing lithium ion, a negative electrode for absorbing and desorbing lithium ion, and a porous film interposed between the positive electrode and the negative electrode. The porous film has a thickness of 0.5 to 20 μm and comprises an inorganic filler and a first binder. A content of the first binder in the porous film is 1.5 to 4 parts by weight per 100 parts by weight of the filler.

One feature of the present disclosure is that the content of the first binder in the porous film is 1.5 to 4 parts by weight per 100 parts by weight of the filler.

During the Examiner interview on April 25, 2011, the Examiner stated that an amendment to the claim 1 to change the content of the first binder in the porous film from “1.5 to 8 parts by weight per 100 parts by weight of the filler” to “1.5 to 4 parts by weight per 100 parts by weight of the filler” would overcome the cited prior art.

This amendment overcomes the cited prior art because Delnick teaches that the ratio of binder to solid particulate is 5/95 to 10/90, which is equivalent to 5.26 to 11.11 parts by weight per 100 parts by weight of filler. As 1.5 to 4 parts by weight is outside the range taught in Delnick, and as none of the other cited prior art teaches this range, the amendment overcomes the rejection. Accordingly, since claim 1 has been amended as recited above, Applicants respectfully submit that claim 1 is now allowable over the cited prior art.

III. All Dependent Claims Are Allowable Because The Independent Claim From Which They Depend Is Allowable

Under Federal Circuit guidelines, a dependent claim is nonobvious if the independent claim upon which it depends is allowable because all the limitations of the independent claim are contained in the dependent claims, *Hartness International Inc. v. Simplimatic Engineering Co.*,

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819 F.2d at 1100, 1108 (Fed. Cir. 1987). Accordingly, as amended claim 1 is patentable for the reasons set forth above, it is respectfully submitted that all pending dependent claims are also in condition for allowance.

IV. Conclusion

Having responded to all open issues set forth in the Office Action, it is respectfully submitted that all claims are in condition for allowance.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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